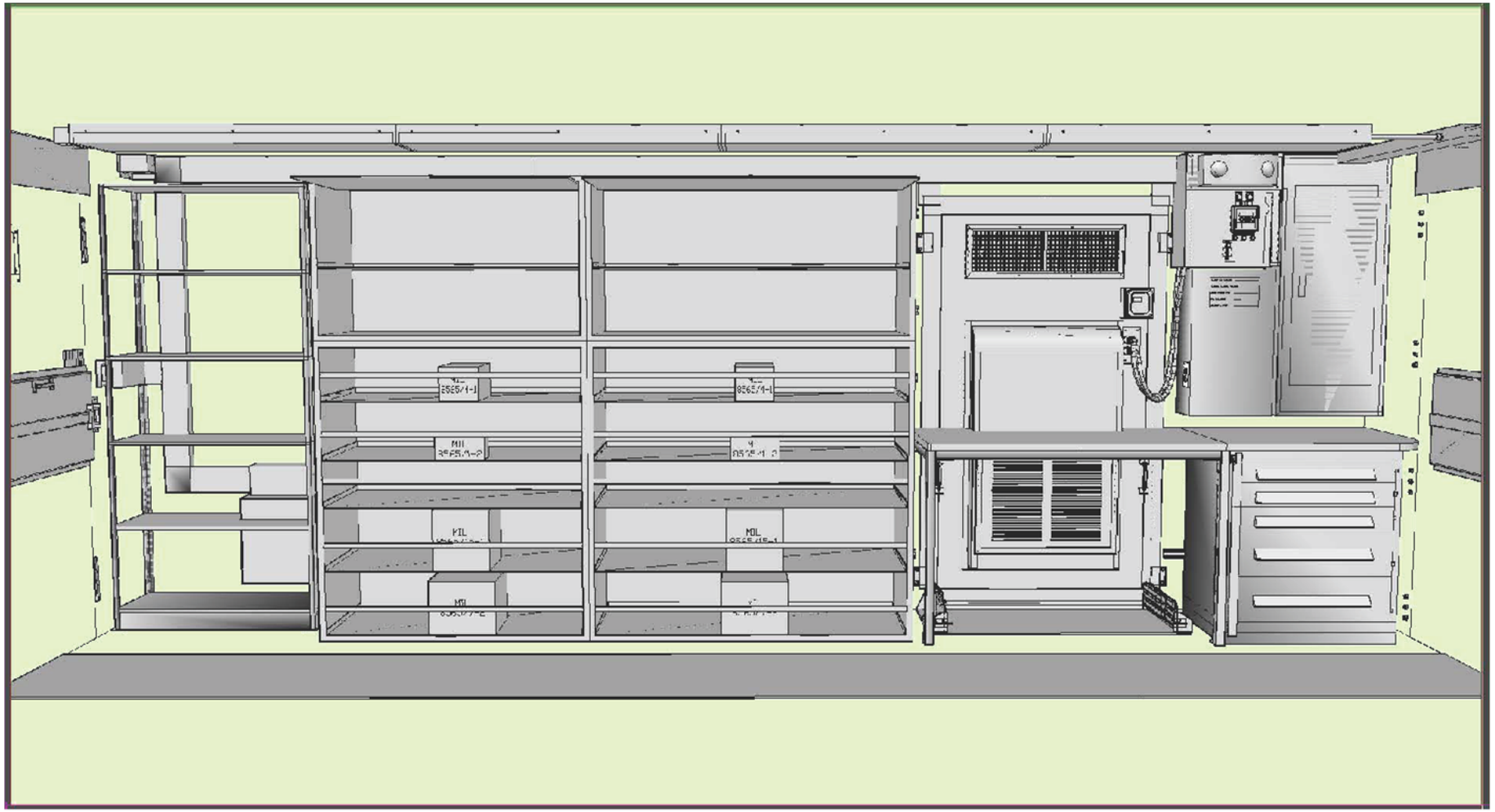
Mobile Facilities Engineering
FRC Southwest, North Island

- Design of MF Configurations
- Lloyd Bjurman, Lead
- Pete Vicencio, Electrical
- Mark Beuster, Mechanical
- Steve Wilson, Electrical

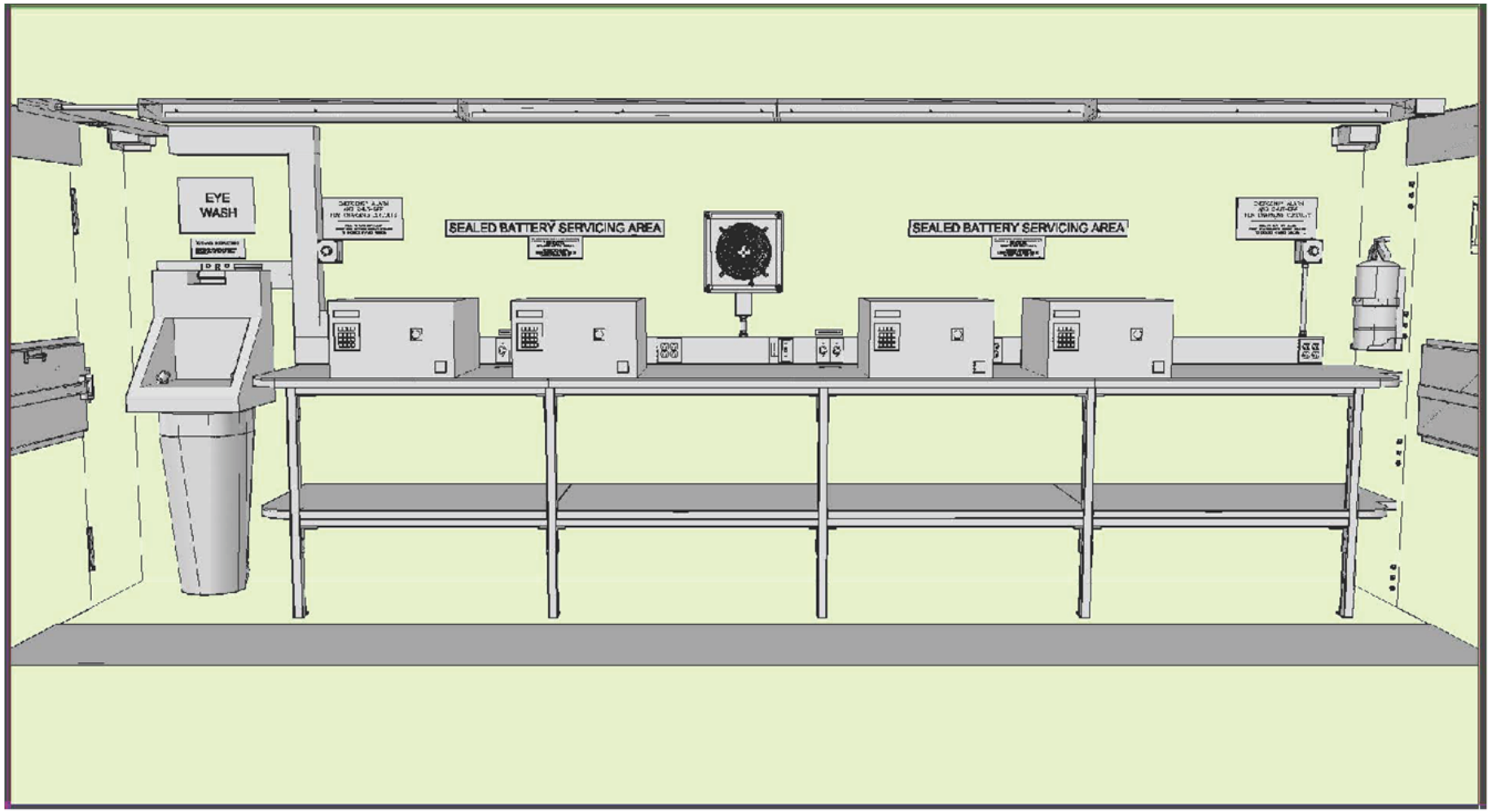
Topics

- LA-02 Sealed Lead-Acid Battery MF (Final)
- NB-04 New Ni-Cad Battery MF (Preliminary)
- TB-03/04 Tube Bender SOMF (Preliminary)
- Lithonia Light Ballast replacement
- Digital Thermostat connection to R-22 ECU
- Update on GDIT Ground-Neutral site visits

LA-02 – Final SLAB MF



LA-02 – Final SLAB MF

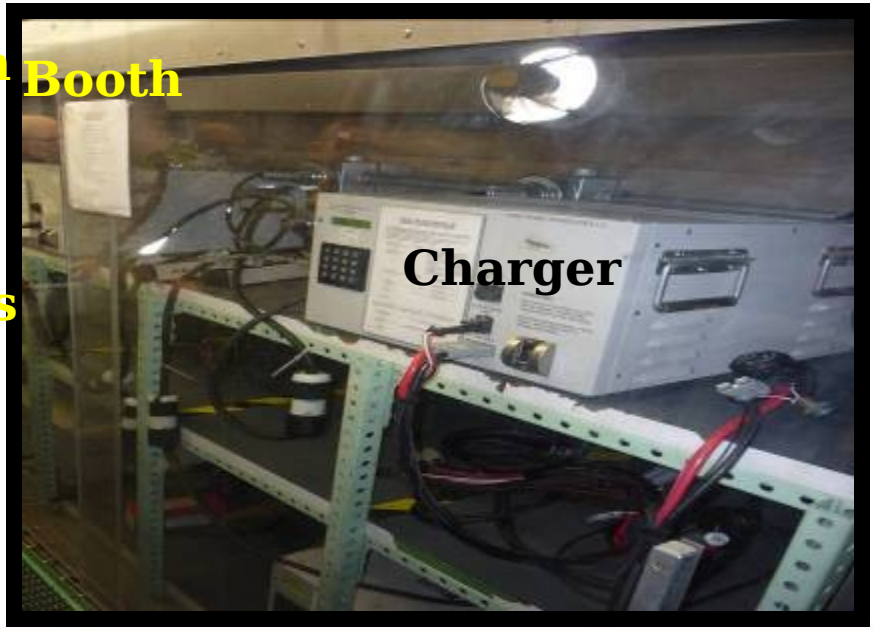


LA-02 – Final SLAB MF

LA-02 – Final SLAB MF

NB03 – Current Ni-Cad MF

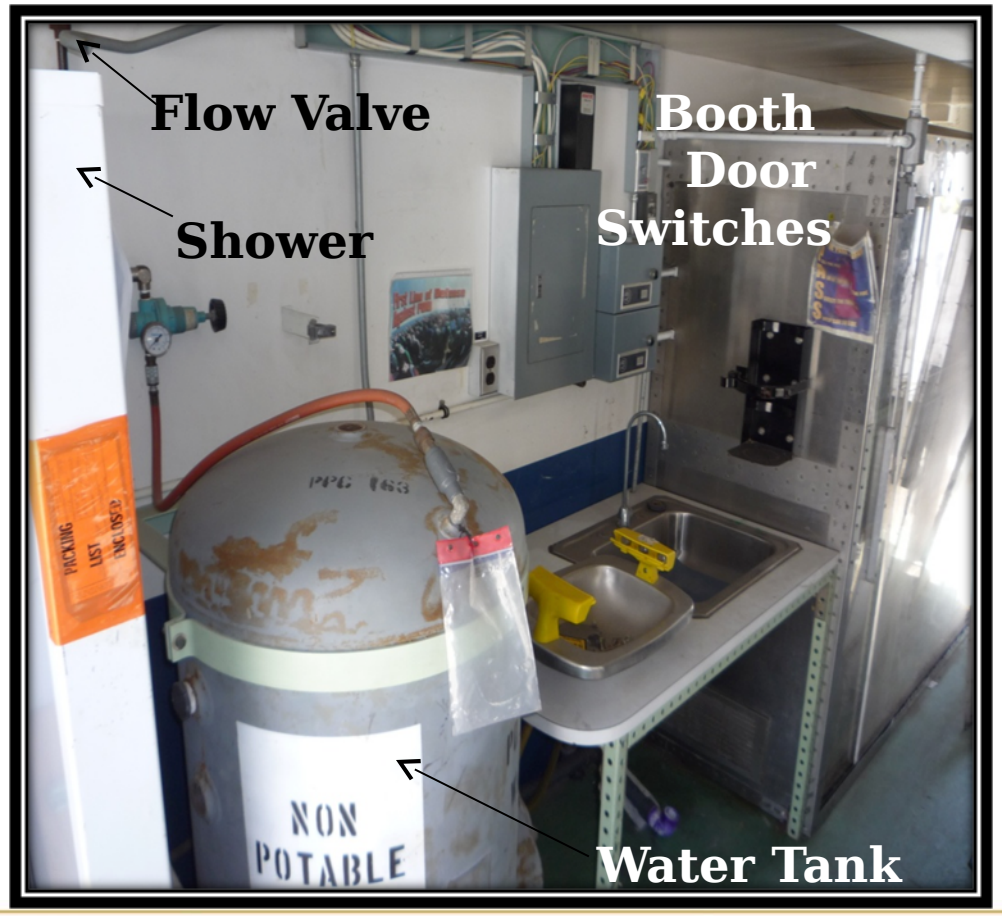
- Designed for “Vented” Ni-Cad
- Expensive Explosion-proof receptacles
- Expensive 3-phase explosion-proof fan
- Has Booths due to Hydrogen produced



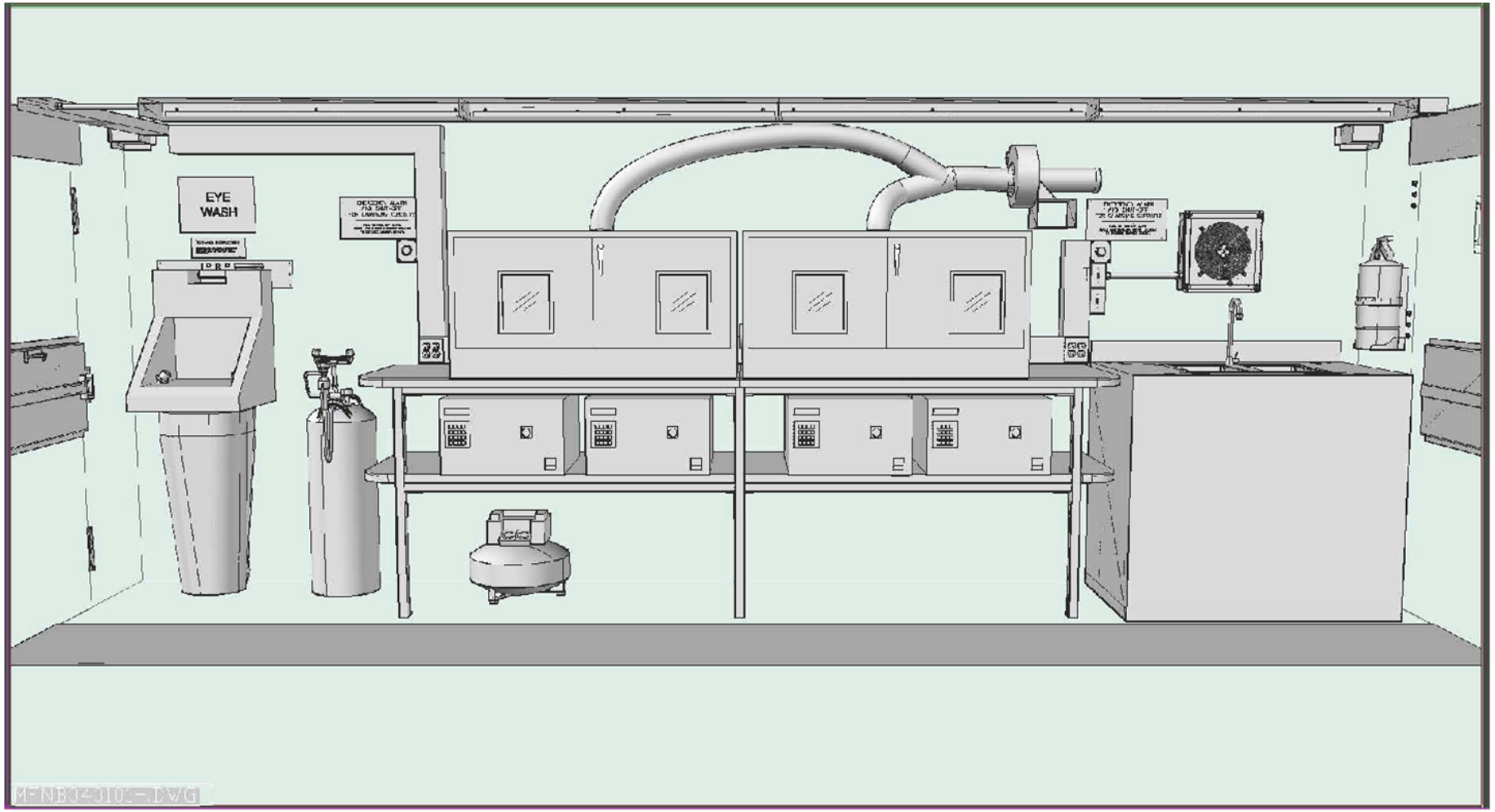
NB03 – Current Ni-Cad MF

Problems with current Battery MF

- Many at MALS are in poor condition
- Many Parts not in the stock system
- Complex Design
- Older Design (1985)



NB04 – New Ni-Cad MF



NB04 – New Ni-Cad MF

Bradley Pressurized Drench Hose/Tank

- Portable Deluge Hose and Tank
- Can be replaced with NSN number item: 4240-01-501-2225
- Small Air Compressor included to pressurize (also has NSN)
- Follow Bradley Maintenance Schedule: Every **4 months** change water (Saline)
- Once a month without saline added
- Used in Army and Air Force mobile battery facility

Photo courtesy Safety Storage, Inc

NB04 – New Ni-Cad MF

Exhaust duct to outside

Clear Front. Easy to see charging.

Easy to access hinged cover.

Hinged Front

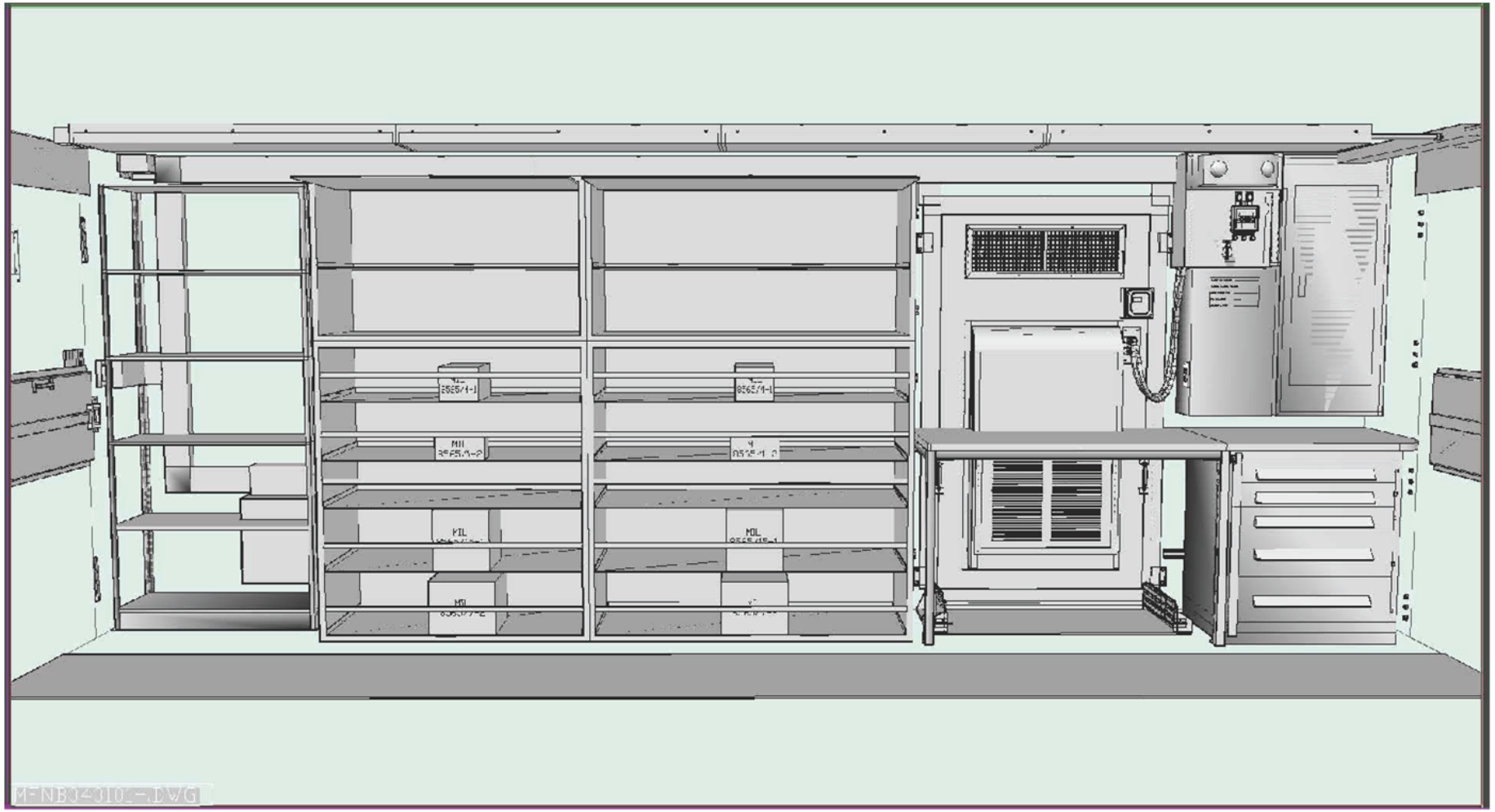
Durable Stainless Steel

Spill Containment in base

Thick , Clear Plexiglass

Battery Charging Hood (Proposed)

NB04 – New Ni-Cad MF



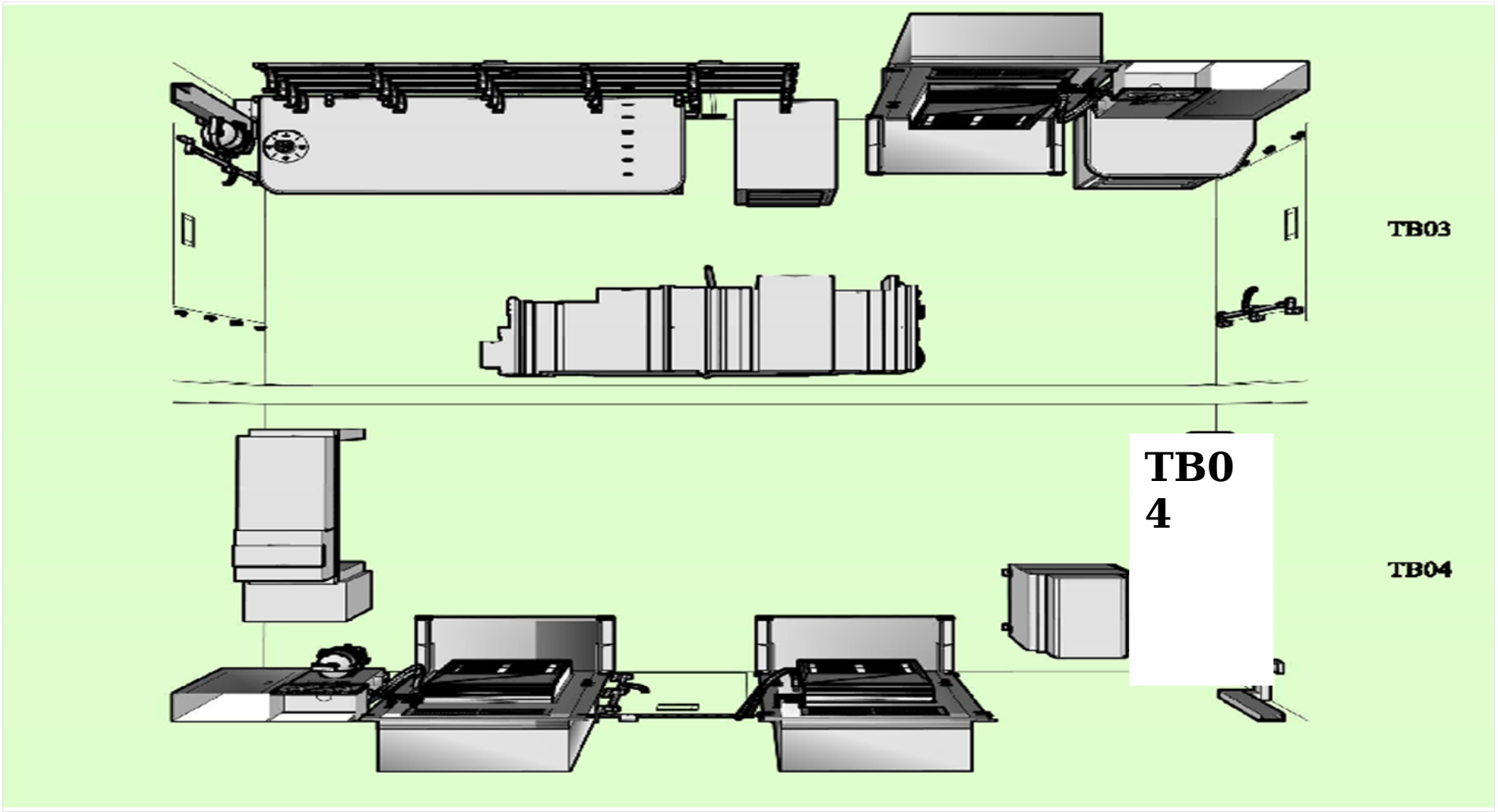
NB04 – New Ni-Cad MF

NB04 – Summary

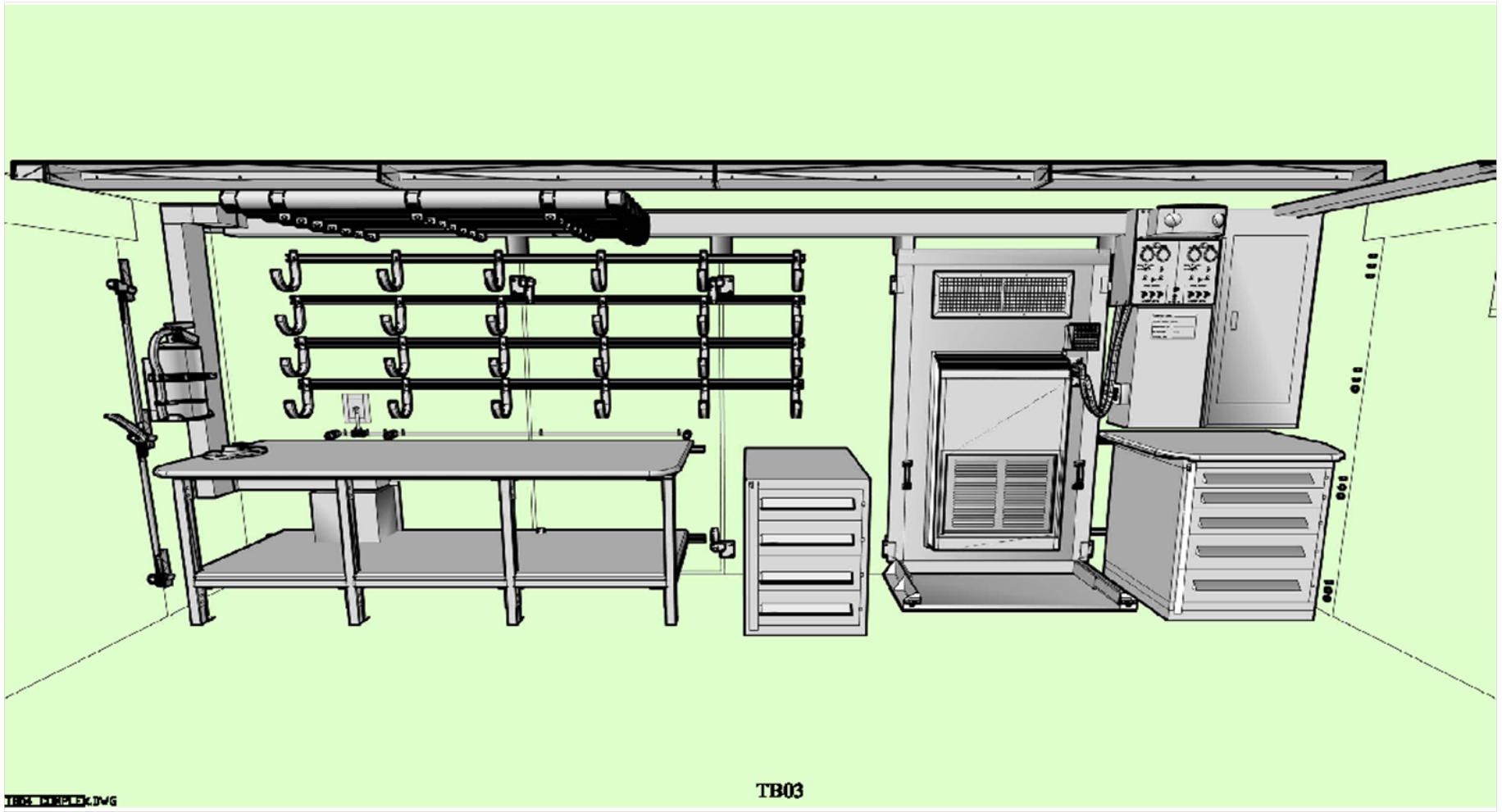
- Simpler design--Easier for MALS to maintain
- Alarm made simpler
  - No flow switch or booth switch
- Eyewash & Drench OSHA/ANSI compliant under 10-second access rule
- Many Major Parts have NSN-numbers
  - Eyewash
  - Portable Pressurized Drench Tank
  - Air Compressor

New Tube Bender
MFs
CSE Tube Bender
TB-03/04
Preliminary Design

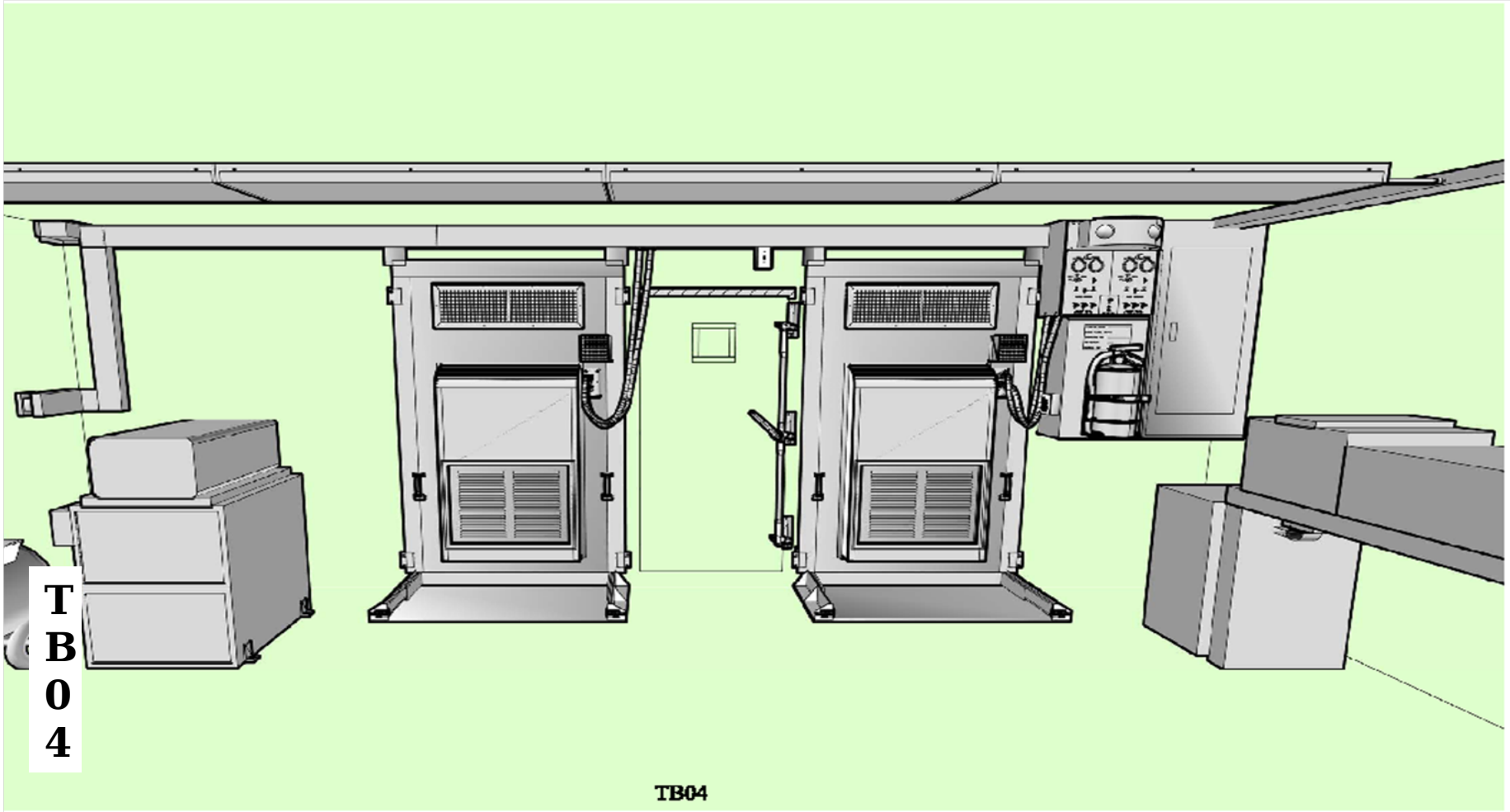
TB-03/04 Tube Bender MFs



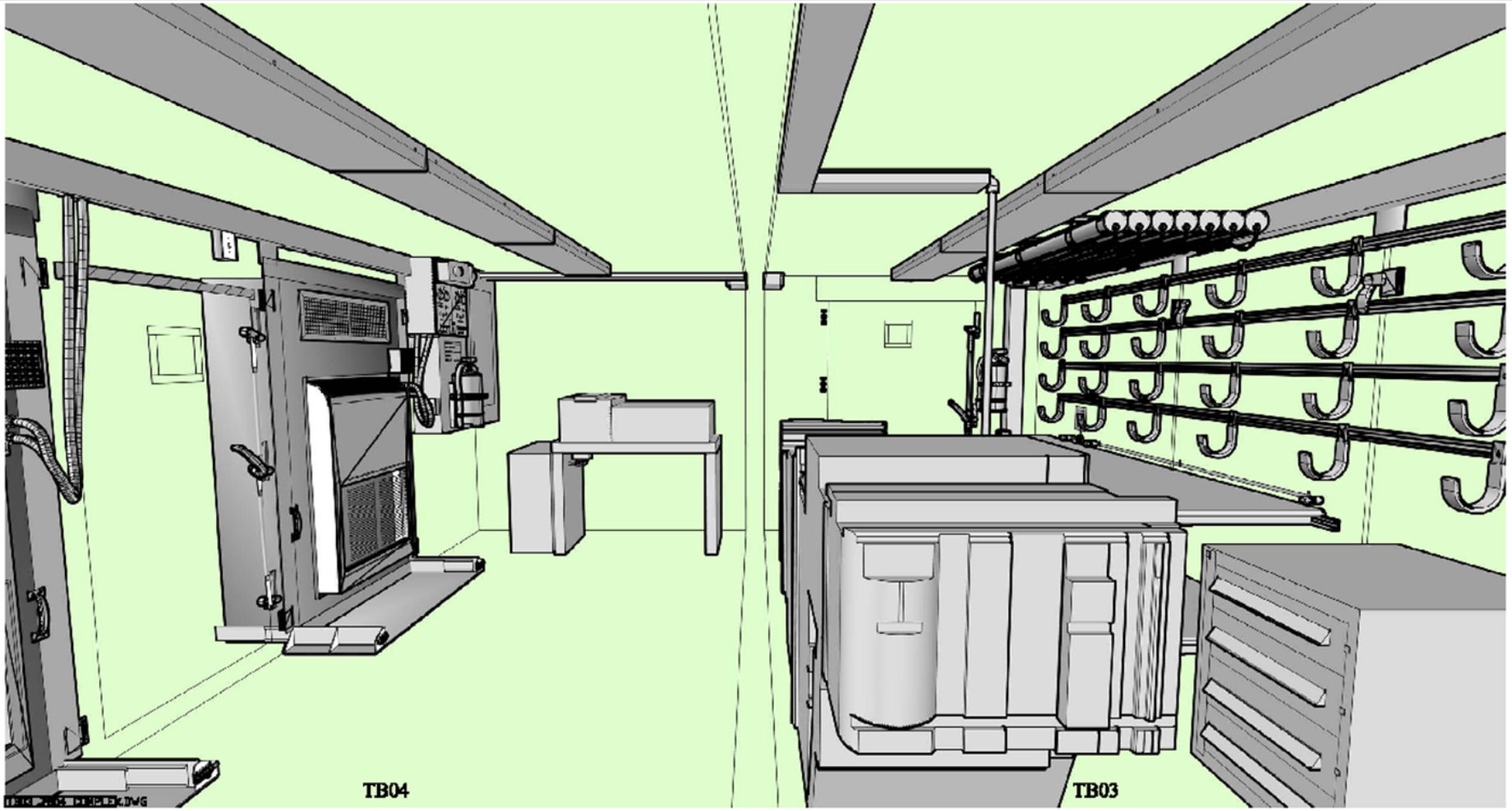
TB-03/04 Tube Bender MFs



TB-03/04 Tube Bender MFs



TB-03/04 Tube Bender MFs



TB-03/04 Tube Bender MFs

- TB-03/04 **replaces** TB-01 at non-V22 MALS (without TB-02)
- MALS-11, 12, 13, 14, 31, 41, 49
- TB-01 **remains** at MALS that have TB-02
- MALS-16, 24, 26, 29, 36, 39

Comand	TB-01	TB-02	TB-03A/04B
MALS-11	1	0	1
MALS-11T	1	0	1
MALS-12	1	0	1
MALS-13	1	0	1
MALS-14	1	0	1
MALS-14T	0	0	1
MALS-16	1	1	0
MALS-24	1	1	0
MALS-26	1	1	0
MALS-26T	0	1	0
MALS-29	1	1	0
MALS-31	1	0	1
MALS-36	1	1	0
MALS-39	1	1	0
MALS-39T	0	0	1
MALS-41	1	0	1
MALS-49	1	1	1
HMX-1	0	1	0
MPS	0	0	0
TOTAL	14	9	10

Old **Lithonia** Light Ballast Replacement

Old Lithonia Light

- Most T12 Magnetic Ballasts discontinued
- Mandated by Dept of Energy Directive
- Switching to Electronic to save Energy

Old Lithonia Light

Newer Kenall Light

Old Lithonia Light

- Replacement Ballast is Electronic
- Use **2-Lamp** Ballast only, **NOT** 4-Lamp Ballast
- Part # B232IUNVHP-B
- NSN 6250-01-508-4527

Old Lithonia Light

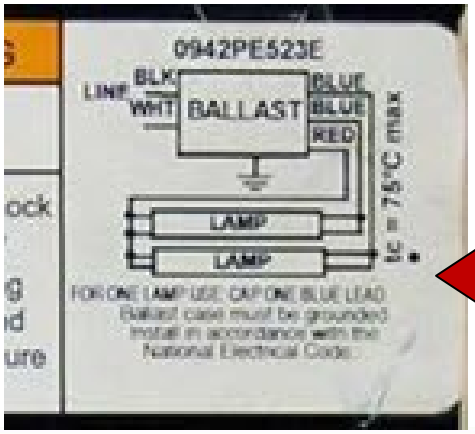
2-Lamp Electronic Ballast

+

T8 Lamp

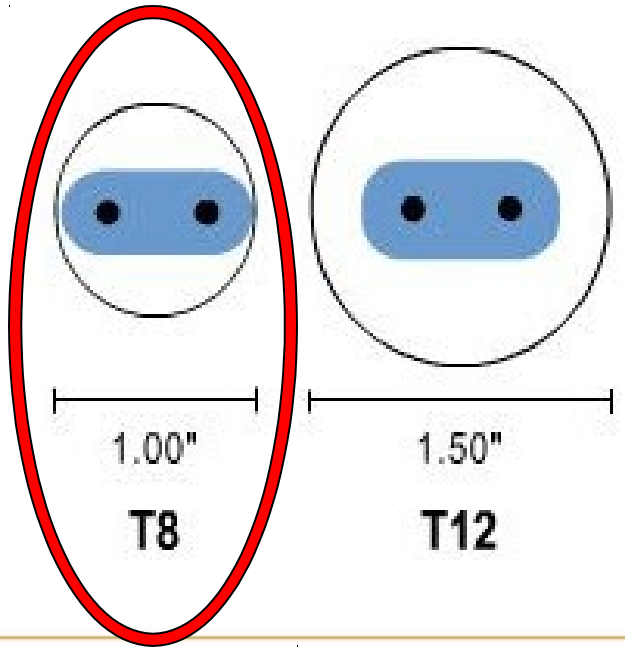
+

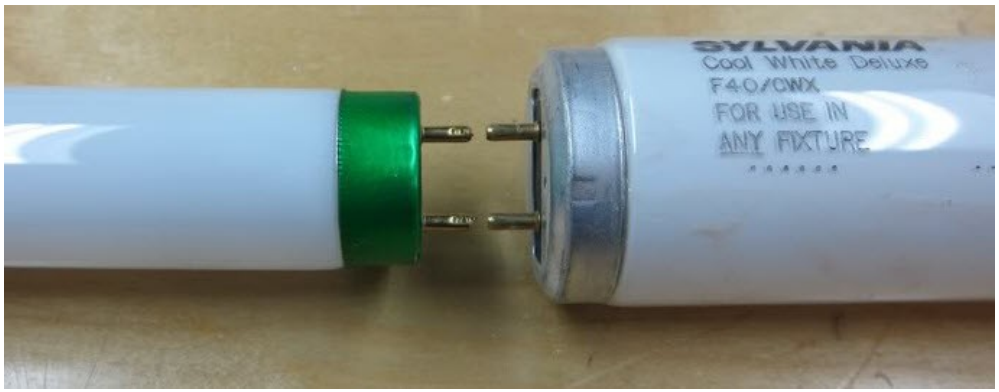
Schematic on Ballast



Old Lithonia Light

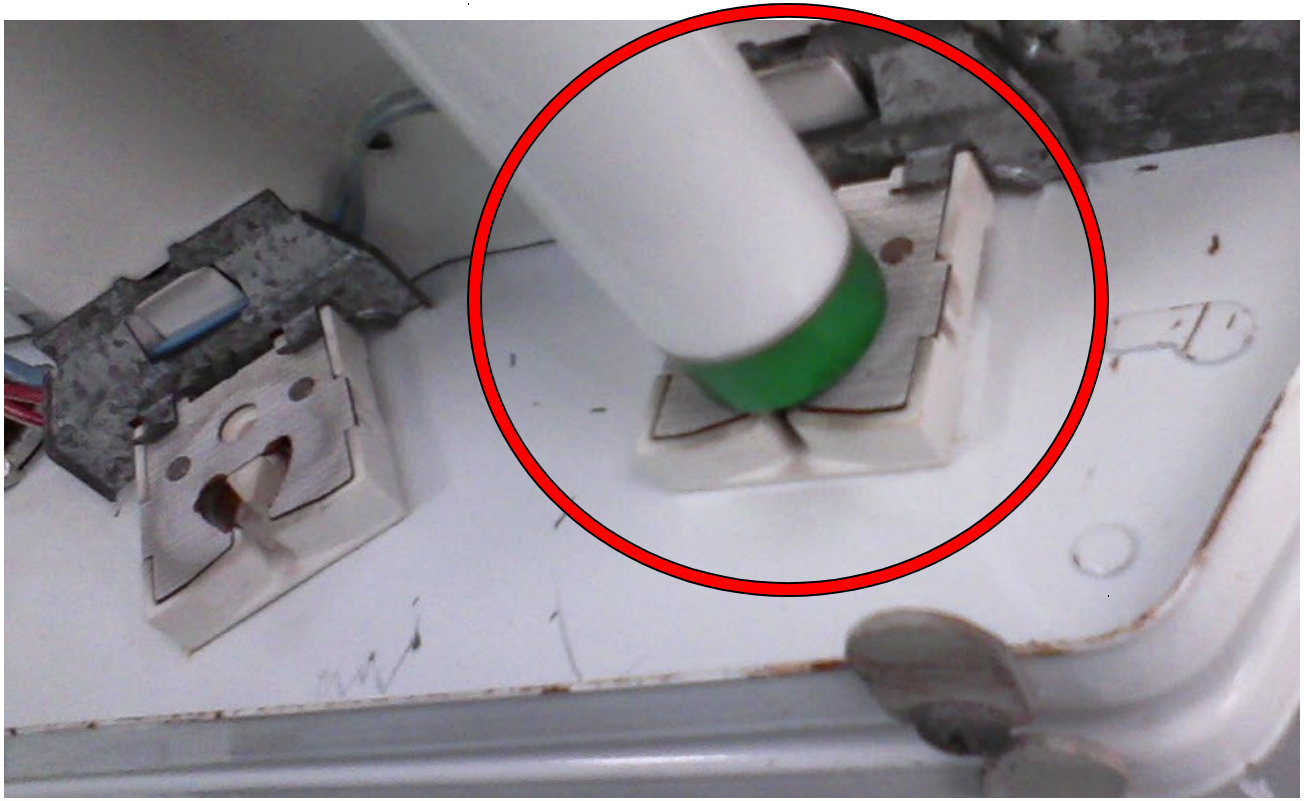
- When installing Electronic Ballast
- Must also install T8 Lamps
- T8 Lamps same as those in Kenall Lights





Old Lithonia Light

- Yes, T8 Lamps fit into Lithonia sockets

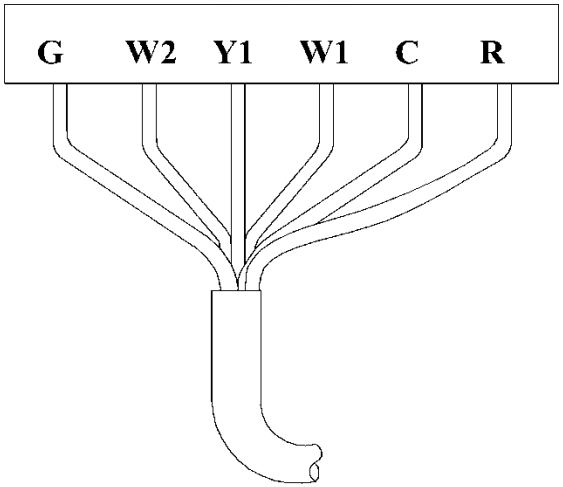


Digital Thermostat

Authorized Digital Thermostat

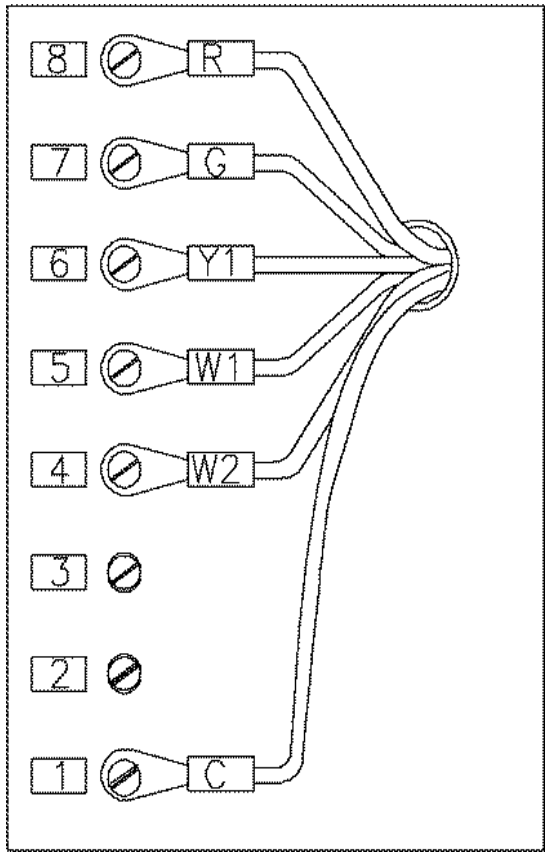
- RobertShaw Model 8425:
- 2 Stage Heat & 2 Stage Cool
- Specified in ECU manual **NAVAIR 17-1-573**, WP 014 00

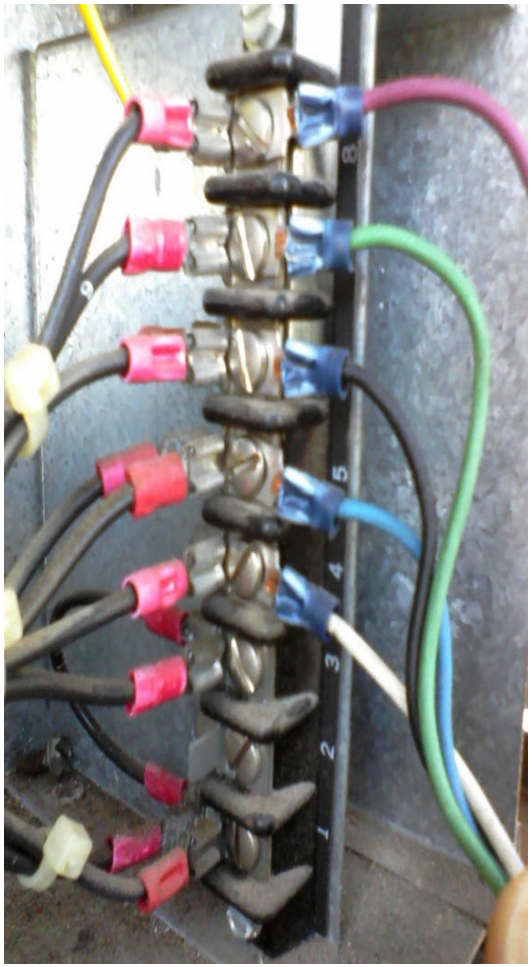
Digital Thermostat – R-22 ECU



6-Conductor Cable

R-22 ECU Control Box





Ground-Neutral Status

- General Dynamics Site Visits Completed:
  - MALS-11, 16, 13, & 24
- Next Sites to visit for G-N Completion*
  - MALS-39, -- August
  - Twentynine Palms, -- August
- Next Sites to visit for G-N checks*
  - MALS-49, -- July
  - MALS-41, -- July
  - MALS-14, 26, 29, 31 – August

***Pending Contract Approval**

Questions ?